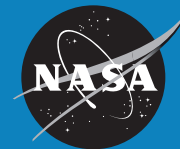


National Aeronautics and Space Administration



**Saturday  
5-14-2011**

**@ NASA GODDARD**

**electronic program**



# People

## BUILDING 1

### Kidz and Space! (Room E100H)

Send your name to Mars. Color rockets to add to a large mural that will be displayed at Goddard. Make a star-finder and discover constellations that can be seen in May. Make your own name tags. Story hour, space dance and word search. 11:00 am–4:30 pm

### What I Wish They Told Me on Career Day (Café)

Goddard is more than rocket scientists. Hear presentations about many career options at Goddard. 11:30 am–12:30 pm and 2:30 pm–3:30 pm

### Gen Y: Our New Generation of NASA Leaders (Café)

Have a conversation with Goddard's Gen Y colleagues as they share their opportunities, experiences and even challenges as part of Goddard's success. 12:30 pm–1:30 pm and 3:30 pm–4:30 pm.

### Greatness@Goddard (Room E100E)

Goddard experts share their knowledge about the Earth we live on and give you a glimpse into their exciting work. 30 minute sessions.

### Photo Booth (Lobby)

Get your face in space! Pick up a picture of you in an astronaut helmet against a cool science backdrop.

### Diversity at Goddard (Café)

Gain insight into diversity at Goddard through the entertaining game, "The Diversity Wheel." See how much you know and how much you can learn!

### Working at Goddard (Room E100D)

See a demo of USAJobs.gov and find out how to apply for positions at Goddard. Learn about all of the many student worker programs. 12:00 pm–12:45 pm (Full-time Job Seekers), 1:30 pm–2:15 pm (Student Programs).

### Goddard's Connection to the Local Communities (Lobby)

Learn of the collaboration and participation Goddard promotes with local communities. The Greenbelt Library will show you how to discover, connect and get inspired!

### Final Hubble Space Telescope Servicing Mission (Lobby)

See rare STS-125 crew footage of the final servicing mission to Hubble.

### Planet Earth Videos (Room E100B)

Witness the glory of our Earth in these stunning videos.



# Universe

## BUILDING 29

### James Webb Space Telescope (JWST)

Engage in the future of space telescopes. See and feel demonstrations of an infrared camera. Touch *JWST* hardware. Complete the *JWST* mirror puzzle. Meet experts who are on-hand to answer your questions.

## BUILDING 34

### Model of a Black Hole

Get lost in a black hole. Build a physical model of space curvature around a mass and a object passing close to it. What happens to that object if the velocity is not high enough or if the "well" is too deep?

### The Balloon Activity

Use balloons and star clusters to see how the universe expands.

### White Light is a Mixture of Many Wavelengths

See for yourself: the light we see is a mixture of many wavelengths of light.

### Why Do We Need to Put Observatories in Space?

See why astronomers need to put telescopes in space. See how light with different wavelengths penetrates or doesn't penetrate Earth's atmosphere.

### X-Ray Astronomy vs. Medical X-Rays

Find out how NASA uses x-rays to see inside cosmic objects. How is it different than a doctor looking inside you?

### Observing Astronomical Change with the Hubble Space Telescope (Tent)

Check out light echo images from *Hubble*. Discover the rare occurrence of observing real-time change on an astronomical scale.

### Change in the Universe Made Our Home! (Tent) **explore**

Explore how change over the lifetime of a large star creates a brilliant explosion and the materials required for life here on Earth!

### Exploring the High-Energy Universe (Tent)

Scientists from two NASA missions show you computer graphics, models and spacecraft hardware.

### Gravitational Waves and the Universe (Tent)

Explore how gravity, gravitational waves, and mass distort spacetime.



= Explorer Map 4 Kids Educational Activity.



# On the Mall

## MALL ACTIVITIES

### ILC Dover, LP (Tent #1)

Check out astronaut space suits from *Apollo* to the space shuttle.

### Alice Ferguson Foundation (Tent #2)

Explore the Potomac watershed with maps and an online GIS.

### American Geological Institute (AGI) (Tent #3)

Conduct hands-on investigations dealing with rocks and minerals.

### Applied Physics Laboratory (APL) (Tent #4)

Try on clean room suits.

### Mad Science (Tent #5)

Come by to taste carbon dioxide, and see some amazing potions!

### The Franklin Institute (Tent #6)

A series of hands-on activities and the world's cheapest space suit.

### U.S. Geological Survey (Tent #7)

View *Landsat* satellite images of Earth.

### The Children's Science Center presents "Great Shakes!" (Tent #8)

Experience basic earthquake concepts.

### Wallops Flight Facility (WFF) (Tent #9)

Learn about our mission at Wallops.

### Education at Goddard (Tent #10)

Learn about education opportunities at all Goddard Centers.

### Independent Verification and Validation (IV&V) (Tent #11)

Control a pneumatic robotic arm and watch a robot demonstration.

### Goddard Amateur Radio (Tent #12)

See and hear demos from club members.

### Capitol College (Tent #13)

### Event Headquarters (Tent #22)

### Astronaut Encounters (Tent #23)

Meet and get a signed litho from Astronauts John Grunsfeld (11:30 am–12:30 pm) and Terry Virts, Jr. (3:00 pm–4:00 pm)\*

### Sign Language Interpreters & Translators (Tent #24)

### Ask an *Explore@NASA Goddard* Expert (Tent #35 & #36)

Drop by the information booths for all your needs.

### Explorer Map 4 Kids Station (Tent #37)

Stop by to get your maps and prizes.

### Environmental Management at Goddard (Tent #38)

Take a look at our environmental management programs and activities.

### Step into a Satellite Image! (Tent #39)

Take one small step onto a giant satellite image of the Chesapeake Bay.

### Security (Tent #40 & #41)

Visit security for help or to address any concerns you may have.

### Solar Prius (Tent #42)

Ride the light in a solar-charged Toyota Prius.

### The Energy Bike (Tent #43)

Learn how much energy it takes to power electrical devices.

### Goddard Food Waste Composting (Tents)

Deposit trash which goes to the Beltsville Agricultural Research Center.

### Moon Bounces

### Star Wars Costuming Organization

Meet characters from *Star Wars* who will mingle and pose for photos.

### Traveling Space Museum

Operate simulators such as Orion Mini-Shuttle, the World's Smallest Jet, Space Shuttle Waste Containment System, and a Mini Hovercraft.

## HELIOPHYSICS DOME

### Goddard Astronomy Club

Take a safe look at the Sun and get a look at some meteorites.

### Magnetic Fields of the Earth

Use spark probes to explore the Sun's interaction with Earth.

### Solar Viewing

See Sun images, recognize changes, and find sunspots using telescopes.

### Solar Viewing on iPads and Smart Phones

See live images of the Sun with heliophysics phone apps.

### Goddard's Aerosol Science and Instrumentation **explore**

Learn about aerosols using advanced field instruments from NASA's Micro Pulse Lidar Network. Experiment with your own measurements.

### Ultraviolet (UV) Radiation

Make a UV bead bracelet and hear about radiation from the Sun.

### What Causes an Aurora? **explore**

See how solar storms impact Earth's magnetic field to create auroras.

## EARTH SCIENCE DOME

### Earth Puzzle

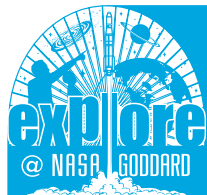
Put Earth back together.

### Gallery of Change

Spot the differences as our Earth constantly changes.

## Mall Food Vendors

Dippin' Dots (Tent #25), Funtastic Foods (Tent #26), Little Jimmy's Fun Foods (Tent #27), Keith's Treats & Eats (Tent #28), Red, Hot & Blue (Tent #29), Pepper Jack Grille (Tent #30), Bayside Bull BBQ (Tent #31), Margaret's Soul Food (Tent #32), KBQ Real Barbeque (Tent #33), The Food Station (Tent #34), Scoops2U (Roaming), Kona Ice (Roaming)



# Solar System

## BUILDING 34

### Walk Through Solar System Times

Take a stroll through the history of the solar system from its formation ~4.6 billion years ago to the present.

### Lunar Reconnaissance Orbiter

Learn everything about Goddard's *Lunar Reconnaissance Orbiter*. See models of the spacecraft and images taken by its instruments.

### The Lunar Exploration Neutron Detector (LEND) Instrument

See images and visualizations to learn more about the LEND instrument on the *Lunar Reconnaissance Orbiter*.

### Atmospheres, Storms and Eruptions—Titan, Saturn and Enceladus

Use an infrared camera to show how Goddard's instrument onboard the *Cassini* spacecraft takes data in infrared. Create a hole in your thermal signature.

### Build Your Own Spectroscope (Room W130)

Make your own spectroscope using simple materials and a diffraction grating. Meet the electromagnetic spectrum and the scientific tool of spectroscopy.

### Ground-Based Astronomy in Support of NASA Missions (Room E151)

Watch captivating video of ground-based astronomical activities.

### Strange New Planet (Room W120, A&B) **explore**

See firsthand how changing technology helps NASA to learn more about objects in the Solar System over time.

### New Horizons

Investigate the *New Horizons* mission to Pluto. See a model of the spacecraft and take the "Is Pluto really a planet?" survey.

### Mosaic Postcards from Mercury

Put Mercury back together using small mercury puzzle slices.

### Planet Walk

Follow images of our solar system through the corridor. Start with the Sun and reach Pluto.

### 1,000 Gum Drops for Chiral Organic Molecules (Tent)

Join Goddard astrobiologists in constructing chiral molecules. See if life started in outer space.

\*=Tentative

**explore**

= Explorer Map 4 Kids Educational Activity.

### Hot Lava: Studying Lava Flows with a Thermal Camera (Tent)

Use an infrared thermal camera to see how different materials heat up and cool down.

### Methane on Mars and on Earth (Tent)

Answer the question: Is Mars geologically or biologically active? See the observed distribution of methane gas on the Red Planet.

### Planetary Magnetospheres and Magnetometers (Tent)

Measure magnetic fields in space with a space-designed magnetometer.

### View Matter in Different Wavelengths (Tent)

See infrared imaging and sensing. View matter in a different wavelength. Use an infrared camera to measure thermal content.

### Mars Garage (Tent)

Meet scientists and engineers who will spark your curiosity about Curiosity, the biggest rover to ever visit Mars.

### NASA Robotics Alliance Project (Tent)

See local robotic teams demonstrate their robots in the FIRST Robotics Competition and VEX demonstration area.

## OTHER STOPS ALONG THE WAY

### Apollo Surface Traverses@Goddard

#### (Walking Route between the Visitor Center and Building 32)

The *Apollo* astronauts did an amazing job exploring the surface of the Moon. Now it's your turn!

## SEE THE VISITOR CENTER ANYTIME

Open all year round, you can browse the unique, informative exhibits such as *Hubble* and Science on a Sphere. Climb inside a Gemini capsule model, try on our kid-sized spacesuit, or participate in one of the monthly model rocket launches (which take place the first Sunday of every month).

<http://www.nasa.gov/centers/goddard/visitor/home/index.html>

## Mail Craft Vendors

Sweet Honey in the Rock Merchandise (Tent #15), Book Vendor (Tent #16), Many Treasures for You (Tent #17), Scentsy (Tent #18), Agape Experience (Tent #19), Hawkeye's Barn Fine Woodworking (Tent #20), Terra Craft Jewelry (Tent #21)





# Engineering & Technology

## **BUILDINGS 3/14**

Take the tour that starts in Building 3 and ends in 14, which includes:

### **NASA Communications Network (NASCOM)**

Tour the NASCOM, the hub for the tracking network that links two million circuit miles of communications channels.

### **Network Integration Center (NIC)**

Check out the communications hub for NASA's spaceflight programs.

### **Space Science Mission Operations**

Tour the control centers for several Goddard missions.

### **Exploration Space Communications (ESC)**

Learn about Goddard's ESC. Walk through the Compatibility Test Van.

## **BUILDING 5**

### **Spacecraft Fabrication Facility Tour**

See where satellite parts are constructed and crafted.

## **BUILDINGS 7/10/15/29**

### **Spacecraft Integration and Test Facility Tour**

Take the tour which starts in Building 7 and ends in Building 29. You'll see the world's largest clean room, Goddard's own "White House," space environment simulator, centrifuge, missions on display and more.

### **Balloon Program**

See a HUGE model of the new super-pressure balloon.

### **Cryogenic Demonstrations (Tent)**

Witness the effects of cooling things to liquid nitrogen temperatures.

### **Aerospace Batteries and Cells (Tent)**

View flight hardware and advanced technology cells.

## **BUILDING 28**

### **NASA Center for Climate Simulation Hyperwall (Room S214)**

Encounter the Hyperwall—a huge multi-screen visualization wall showing high-definition climate simulations.

Demos 11:30 am–4:00 pm with shows on the 1/2 hour.

Max capacity: 25 per show.

### **Amazing Science in 3D (Room S121)**

See mind blowing 3D segments that focus on Earth science.

Demos 11:30 am–4:00 pm with shows on the 1/2 hour.

Max capacity: 25 per show.

### **NASA Center for Climate Simulation High Performance Computing Facility (Room S100)**

Do you think you have a super computer? Check out ours.

### **Federation of Galaxy Explorers (FoGE)**

Try on a space suit and moon boots while learning about gravity. Learn how space exploration helps us understand our home planet.

### **Flight Dynamics Cave (Room N222)**

Experience piloting a NASA spacecraft in "The Cave."

### **Flight Dynamics Facility (Room N222)**

Visit with spacecraft orbit and control experts and learn how we design how spacecraft orbit the Earth.

### **Animation Demo**

Witness animations from the forefront of space and Earth science.

### **TV Studio (Room N169)**

Tour the Goddard television studio.

### **NASA Home and City**

Visit the Innovative Partnerships Program (IPP) exhibit and see how space exploration improves our lives.

### **Technology Spinoff Game**

Spin the wheel, answer questions and win prizes as part of the IPP exhibit!

### **NASA Massively Multiplayer Online (MMO) Game**

Take a look at NASA's MMO game as part of the IPP exhibit.

### **Optimus Prime®**

Watch submissions from the Optimus Prime® Spinoff Video Contest as part of the IPP exhibit.

### **Quality Engineering Gives a Smooth Ride to Science**

Discover quality engineering concepts through hands-on activities.

### **Security of Web Information**

Open your eyes to information security and privacy on the Web.

### **Explorer Map 4 Kids Station**

Stop by to get your maps and prizes.

## **OTHER STOPS ALONG THE WAY**

### **To the NASA Cloud!**

#### **(Walking route between Building 5 and Building 28)**

Enter the NASA Cloud container and understand the cutting-edge technology.



= Explorer Map 4 Kids Educational Activity.



# Earth Science

## BUILDINGS 3/14

### How Tall is That Tree? (Tent) **explore**

Measure heights of trees and compare your findings with state-of-the-art measurements from scientists.

## BUILDING 28

### GeoDome Portable Planetarium **explore**

Explore change. Understand your home and your future in our universe. Go on a journey through time and space to explore how NASA satellites have paved the way to a better understanding of Earth. See how Earth has changed through time and what those changes may tell about the future Earth. Demos 11:30 am–4:00 pm with shows on the 1/2 hour. Max capacity: 30 per show.

## BUILDING 32

### Earth Observing Satellite (EOS) Mission Control Center

See where and how NASA's Goddard Space Flight Center controls several Earth-observing satellites. Space Science Mission Operations will also offer tours of the *Lunar Reconnaissance Orbiter* Mission Operations Center.

### NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) and National Weather Service

NOAA's NESDIS and the National Weather Service will show visuals and present educational weather games to the general public.

### Missions Table

Explore missions such as NPOESS Preparatory Project (NPP), A-Train, Global Precipitation Measurement (GPM), and more.

### NASA Climate Day

Learn more about climate change through activities and presentations.

### Photo Booth (Lobby)

Caputre yourself in space! Get a picture to commemorate the event.

## VISITOR CENTER

### Make a Cloud! (Tent)

Make your own cloud in a bottle with water, dust particles and temperature or pressure changes.

### Experience a Thermal Infrared Camera (Room N100B) **explore**

Discover how infrared technology helps scientists understand your home planet and home universe.

### Population and Pollution **explore**

Explore the relationship between nitrogen dioxide and population density in various cities.

### Global Temperature Investigators (Room N100B) **explore**

Figure out what is happening to average global temperatures.

### Hands-on Exploration of Earth (Room S100A) **explore**

Become a NASA scientist by exploring satellite images of Earth to investigate the impact of rising temperatures.

### A View from the Top (ERC) **explore**

Connect live with NASA's Digital Learning Network! Join us for a live and interactive videoconference to learn how NASA uses satellites to explore our planet Earth.

### Talk to a NASA Scientist...in Greenland! (ERC)

Talk live to a NASA scientists participating in the IceBridge campaign in Greenland.

### Earth Science Tic-Tac-Toe (Tent) **explore**

Get hip to Earth science while playing this classic game.

### Arctic Sea Ice Explorers **explore**

Through the use of ICESat images, see how Arctic sea ice has been declining over the last several years.

### Space Operations Learning Center (SOLC)

Use touch screen monitors to try out SOLC software to "Save the Forest."

### Step into a Satellite Image! (Tent)

Take one small step onto a giant satellite image of the Chesapeake Bay.

### Explorer Map 4 Kids Station

Stop by to get your maps and prizes.

## OTHER STOPS ALONG THE WAY

### Know Your Earth (Walkway from the Mall to the Visitor Center)

Test your Earth knowledge with Know Your Earth questions along the walkway from the Goddard Mall to the Visitor Center. Then watch "Know Your Earth" at the Visitor Center.

### Goddard from Above (Walkway from the Mall to the Visitor Center)

Satellite images show the spatial scale differences of the same forest area from space.

### Event Evaluation (Back Gate of Visitor Center) **explore**

Help us evaluate our event. We appreciate your feedback.

## HOW ARE WE GOING GREEN?

In keeping with our green-themed event, we've asked our vendors to use green products, incorporated pedestrian-friendly walking routes, and installed waste stations to sort recyclables, trash, and compostable materials (which a SOMAT truck will deliver to the Beltsville Agricultural Research Center).





Explore@NASA Goddard Sponsors



**Honeywell**

**Raytheon**



National Capital Section



**Orbital**

Other Partners Include: Inuteq, ASRC ARTS, ASRC Management Services, ASRC Aerospace, ASRC Primus, JHU-APL, Sigma Space, Northrop Grumman, Space Systems, Northrop Grumman, Technical Services

Special thanks to Jersey Mike's, Goddard Alliance and GEWA.

Look for these sponsors on the Mall:

Honeywell (Tent #44), SGT (Tent #45), SAIC (Tent #46), Raytheon (Tent #47), NASA Federal Credit Union (Tent #48)